16-8 INPUTS STANDALONE DIGITAL VIDEO RECORDER

ART. 49146-49148

Please read this manual thoroughly before use
and keep it for future reference.

INVENTING INNOVATION

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WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER(OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of graphical symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to person.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

The user is obliged to inform himself and to conform himself to the national and local rules concerning the monitoring and the audio and video recording. Nobody else will consequently be held responsible for an improper use of this system which could break the laws in force.

IMPORTANT SAFEGUARDS

1. READ AND KEEP THESE INSTRUCTIONS
Please read this manual thoroughly before use and keep it for future reference.

2. CLEANING
Unplug this equipment from the wall outlet before cleaning it. Use a mild household detergent, never use strong solvent. Clean the unit with a slightly damp soft cloth.

3. ATTACHMENTS
Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

4. WATER AND/OR MOISTURE
Do not use this equipment near water or in contact with water.

5. ACCESSORIES
Do not place this equipment on an instable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions and shoul use a mounting kit approved by the manufacturer. This equipment and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the equipment and cart combination to overturn.

6. VENTILATION
If existing, the openings or ventilation grills of the device have been planned with the scope to supply ventilation to the apparatus, to assure a reliable operation of the same and to protect it from overheating. Do not block or cover these openings.

7. POWER SOURCES
This equipment should be operate only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company. Warning if this equipment works with battery, risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the local law.

8. GROUNDING
Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider that the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

9. POWER AND CONNECTION CABLES PROTECTION
Protect the cables from being walked on or pinched particularly at plugs and the point where thy exit from the equipment.

10. LIGHTNING STORM
For added protection for this equipment during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power line surges.

11. OVERLOADING
Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

12. SERVICING
Do not attempt to repair this equipment yourself. The opening and the movement of the covers could you expose at high voltage or other dangers. Refer all servicing to qualified service personnel.

13. DAMAGE REQUIRING SERVICE
Unplug this equipment from the wall outlet and refer servicing to qualified personnel under the following conditions:

a. If the power supply cord or the plug has been damaged.
b. If liquid is spilled or objects have fallen into the equipment.
c. If the equipment has been exposed to rain or water.
d. If the equipment does not operate normally by following the operating instructions. Adjust only those controls that are covered by operating instructions. An improper adjustment of other controls may result in damage.
e. If the equipment has been dropped or the case damaged.
f. If the equipment exhibits a distinct change in performance.

14. REPLACEMENT PARTS
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may results in fire, electric shock or other hazards.

15. SAFETY CHECK
Upon completation of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

16. INSTALLATION IN PUBLIC PLACES
This kind of installation would have to be made by specialized personnel and to be in compliance with the local laws.

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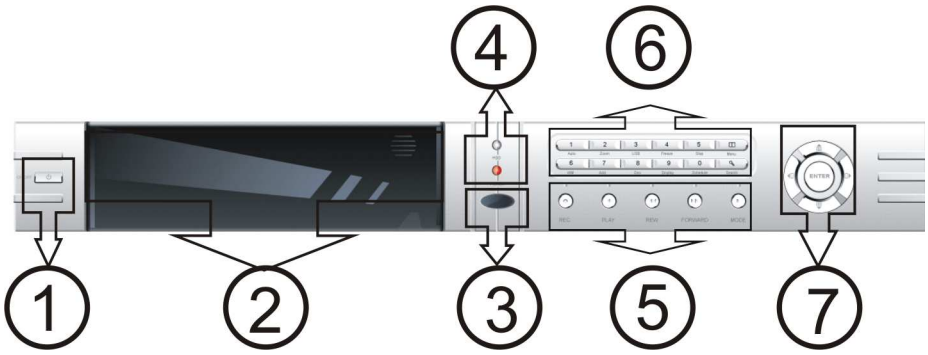
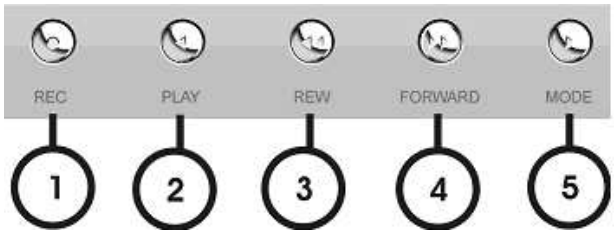
1. FEATURES AND FUNCTION

- Video input: 8/16 channels; Video output: 3 channels.
- Audio input: 4 channels; Audio output: 2 channels.
- 16 alarm input and 1 relay alarm output.
- Compression mode: M-JEPG.
- Support USB disk and CD_RW backup (optional).
- Compatible with NTSC and PAL format.
- Support zooms, auto function, watermark security.
- Four optional levels of image quality: very high, high, normal, low. Record and playback frame rate changeable for recording.
- Support alarm recording, time recording.
- Support loss and motion detection functions.
- Multi-function searches: be able to distinguish different alarm records and time records from ordinary records; be able to search by time, by segment or by event.
- Support various playback modes: pause, several fast forward and backward play modes.
- Equipped with remote device and PTZ control enables (RS485).
- Triplex operation can play back, recording and network view.
- 480 frame (NTSC, PAL is 400) per second for view, 120 frame (NTSC, PAL is 100) per second f or recording.
- ATA-100 Hard Disk Interface, support over 200G Byte.

2. UNIT DESCRIPTION OF FRONT PANEL



1 - ON/OFF, DVR Power Switch.
2 - CD-RW OR HDD Window
3 - IR Window
4 - HDD LED and Power LED.
5 - Recording/Playing Control Buttons Area



1. REC: It is manual recording button. Push this button to record video to hard disk. Re-push this button, it will stop recording. So, this button is the switch button of manual recording and stopping recording operation, recording and stop will work simultaneously on 16 channels. This button doesn't work in schedule mode.

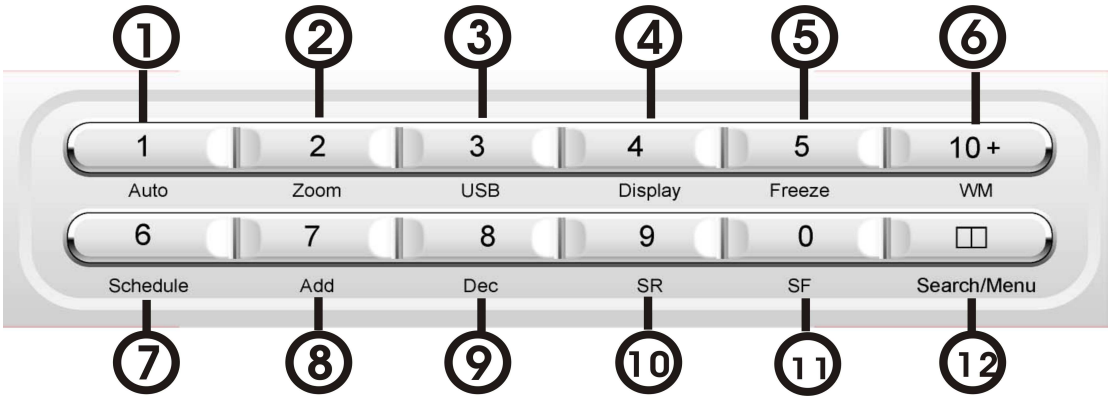
2. PLAY: Push this button to start playing the video stored in hard disk. Re-push this button, it will stop playing. So, this button is the switch button of playing video and stopping playing operations. Play and stop will work simultaneously on 16 channels. This button doesn't work while time recording and alarming recording.

3. REW: fast backward button. Push this button to start fast backward playing till push play button to start normal playing.

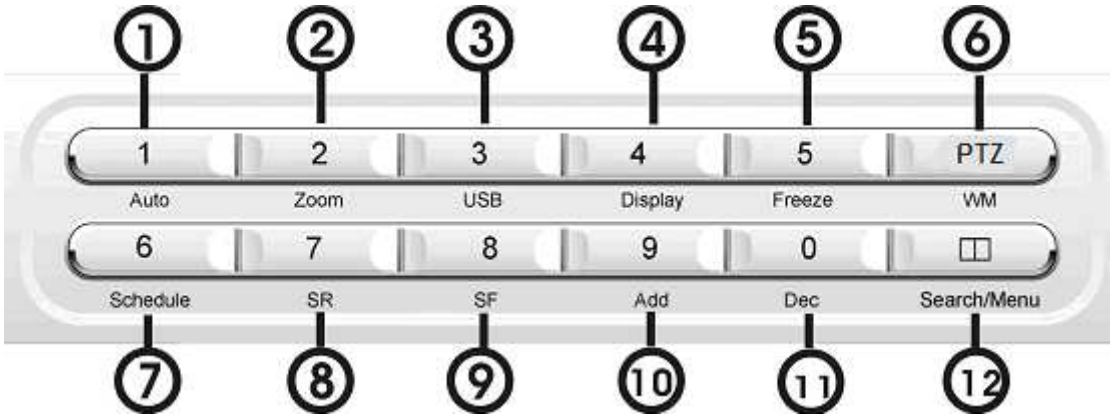
4. FORWARD: fast forward button. Push this button to start fast forward playing till push play button to start normal playing. The fast forward has five speeds, each time you push the button will change the speed from slow to fast and then back to slow.

5. MODE: mode change key, push this key to change to shift mode. Re-push to change to normal mode.

6 - Function Control Area



16CH DVR



8CH DVR

1. Auto/1: Auto key. In shift mode, push this button, the DVR will be in auto dwell state. It dwells according to the time set in auto sequence set menu, you can set the dwell time of each channel. Push this button to quit this mode. If not in shift mode, push this button to see big picture of channel 1. While inputting numbers, this button is used as number key of "1".

2. Zoom/2: Zoom key. In shift mode, push this button, the DVR will be in zoom mode. Please refer to zoom operation in user guideline for details. Push zoom button again to cancel zoom operation. If not in shift mode, push this button to see big picture of channel 2. While inputting numbers, this button is used as number key of "2".

3. USB/3: USB key. In shift mode, push this button, the DVR will start USB backup. Please refer to USB backup operation in user guideline for details. Push USB button again to cancel USB backup. If not in shift mode, push this button to see big picture of channel 3. While inputting numbers, this button is used as number key of "3".

4. Display/4: Display key. In shift mode, push this button to display current information on the screen. Push again this to clear the information display. If not in shift mode, push this button to see big picture of channel 4. While inputting numbers, this button is used as number key of "4"

5. Freeze/5: Freeze key. In shift mode, push this button, the DVR will be in freeze mode. Please refer to freeze

operation in user guideline for details. Re-push this button to quit freeze mode, If not in shift mode, push this button to see big picture of channel 5. While inputting numbers, this button is used as number key of “5”.

6.WM/10+: Watermark button. In shift mode, if the DVR is playing video, you can push this button to see the watermark of the picture. If the video was recorded by this DVR and has not be changed, there will be a watermark symbol in each picture. Push watermark key again to clear the display. If not in shift mode, push this button and then push 1 to 6 to see big picture of channel 11 to channel 16. In 8CH DVR, this button is PTZ.

7. Schedule/6: Schedule button. In shift mode, push this button to enter schedule state. If the DVR is in schedule state, there will be an “S” symbol on screen. Push again this button to quit schedule mode. If not in shift mode, push this button to see big picture of channel 6. While inputting numbers, this button is used as number key of “6”.

8. ADD/7: Add button. Push this button to see big picture of channel 7. When in system setup menu this is an increase button. While inputting numbers, this button is used as number key of “7”. In 8CH DVR, this button is “SR”.

9. DEC/8: Decrease button. Push this button to see big picture of channel 8. When in system setup menu this is a decrease button. While inputting numbers, this button is used as number key of ”8”. In 8CH DVR, this button is “SF”.

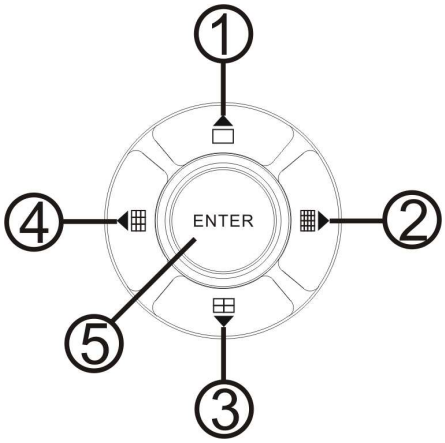
10. SR/9: Single frame rewind button. In shift mode, while in playback state, long press this button to see single frame rewind. Press play button to play normally. If not in shift mode push this button to see big picture of channel 9. While inputting numbers, this button is used as number key of “9”. In 8CH DVR, this button is “Add”.

11. SF/0: Single frame forward button. In shift mode, while in playback state, long press this button to see single frame forward. Press play button to play normally. If not in shift mode push this button to see big picture of channel 10. While inputting numbers, this button is used as number key of “0”. In 8CH DVR, this button is “Dec”.

12. Search/Menu: push this button to enter search menu, please refer search play in user guideline for details. **Long press** this key to enter menu (need password). In menu setup push this key to quit current menu.

7 - Channel Choosing Control Area

1. Single Channel/up: Push this button to see full screen. Re-push this button to see the next channel. While selecting menu items, push this button to move up the cursor.



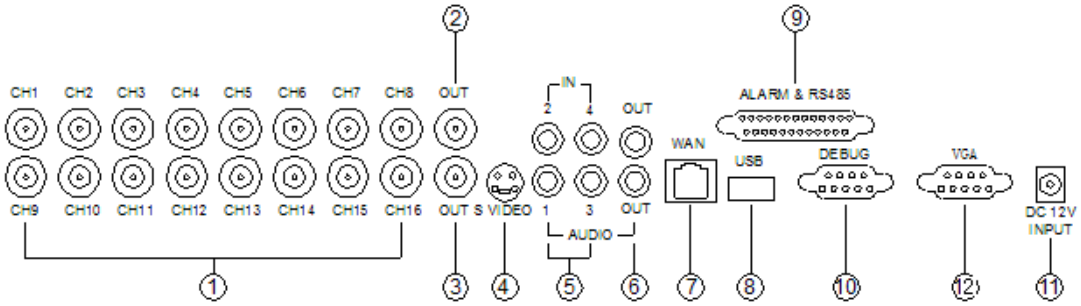
2. Sixteen Channel /right: Push this button to see sixteen pictures display. Re-push this button to see thirteen pictures. While selecting menu items, push this button to move the cursor rightward. In 8CH DVR, push this button to see nine pictures display. Re-push this button will display next four pictures.

3. Four channel/down: Push this button to see four pictures display. Re-push this button will display next four pictures. While selecting menu items, push this button to move down the cursor. In 8CH DVR, push this button to see full screen. Re-push this button to see the above channel.

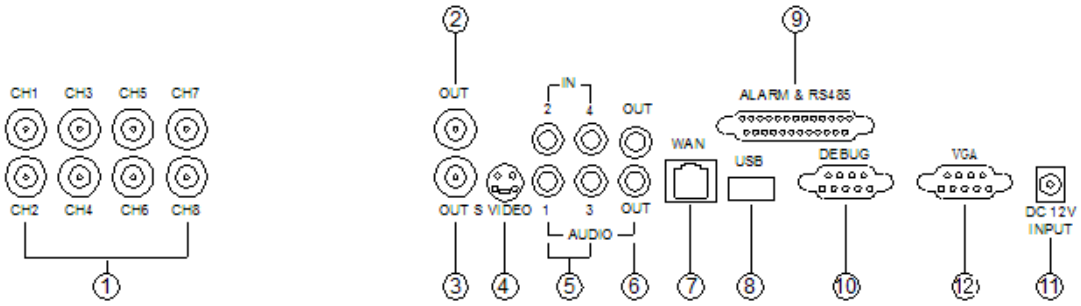
4. Nine Channel/left: Push this button to see nine pictures display. Re-push this button to see eight pictures. While select menu items, push this button to move the cursor leftward. In 8CH DVR, push this button to see four pictures display. Re-push this button to see the next four pictures.

5. Enter: While selecting menu items, push this button to select the item.

3. REAR PANEL AND SYSTEM CONNECTION



16CH DVR



8CH DVR

3.1 Back panel and connection terminals

The power cable and input / output signal terminals are all at the back of the machine, The connection to monitor, camera etc equipments are all carried out through the terminals and sockets on the back panel .

The back view of the machine is illustrated as below.

Each part of the back panel is illustrated as below:

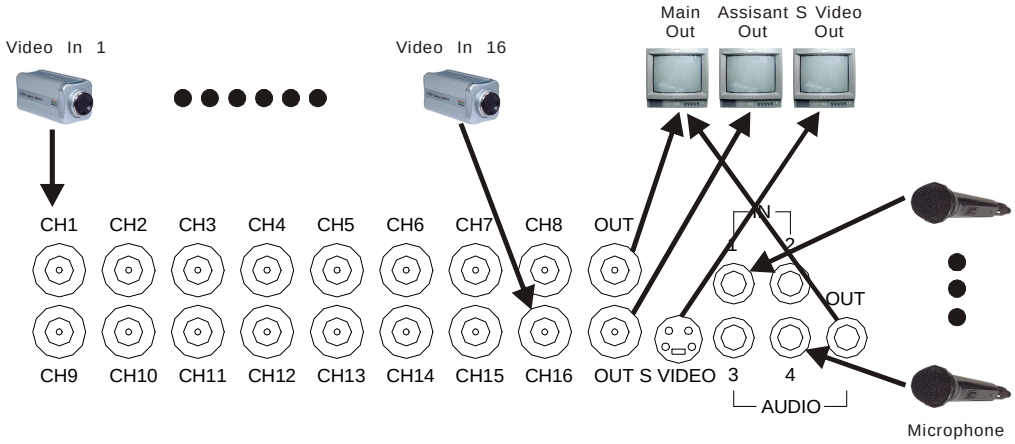
1. Video input 1÷16 (or 1÷8); **2**.main output; **3**.assistant monitor; **4**.S-VIDEO; **5**.audio input; **6**.audio output; **7**.net interface; **8**.USB port; **10**.debug port; **11**.power; **12**.VGA port

9. Alarm and RS485 port define:

1-12: sensor 1 ÷ sensor 12; **13**: VCC; **20-24-25**: GND; **14 ÷ 17**: sensor 13 ÷ sensor 16; **18**: RS485A; **19**: RS485; **21**: COM; **22**: NC; **23**: NO

3.2 Video and Audio Connection

The DVR can support up to 16 cameras video input at the same time**.**


Video In 1
Video In 16
Main Out
Assisant Out
S Video Out
CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 OUT
CH9 CH10 CH11 CH12 CH13 CH14 CH15 CH16 OUT S VIDEO
1 2 OUT 3 4
AUDIO
Microphone

16CH DVR

The DVR can connect 4 channel's audio input, but you can only select one for recording. To display the DVR picture, the DVR video output signal should be transferred to your TV set or monitor. Any TV set that has a "video input" terminal is suitable for displaying the image. The figure above shows the video and audio signal line connection.

Note: at one time, you can only connect one audio input, which means, if you connect an audio to CH1, you cannot connect any CH2 to CH4.

3.3 Alarm Connection

The DVR can support up to 16-alarm input and 1 alarm output.

Alarm input: there are two types of alarm input.

1. Voltage output (5V and 0V)

   A: In case sensor output high voltage (5V) normally and output low voltage when triggered (0V), then users must set DVR as low voltage alarm.

   B: In case sensor output low voltage (0V) normally and output high voltage when triggered (5V), then users must set DVR as high voltage alarm.

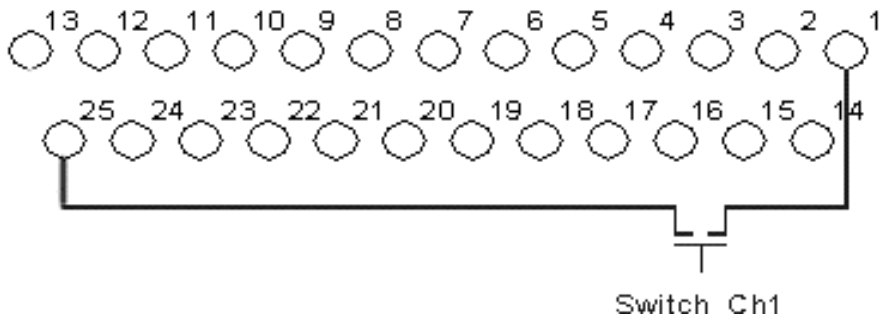
   Please refer to the picture below, channel 2 to channel 16 are the same as channel 1.

2. Open/Close output

   A: N.O. Normally open, close when triggered. DVR must set as low voltage alarm.

   B: N.C. Normally close, open when triggered. DVR must set as high voltage alarm.

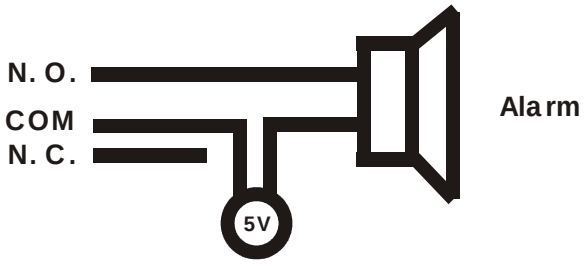
   Please refer to the picture below, channel 2 to channel 16 are the same as channel 1.



Alarm output:

There are three alarm output pin, the status of these pin are illustrated as below

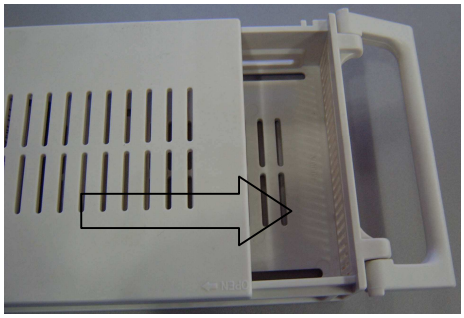
There is an example for alarm output connection



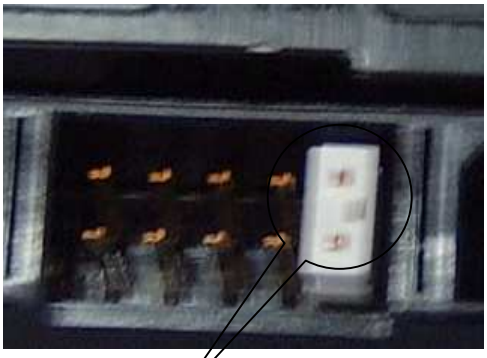
3.4 Hard Disk Connection

1. Push out the hard drive rack from the DVR side panel.

2. Open the top cover of the drawer.

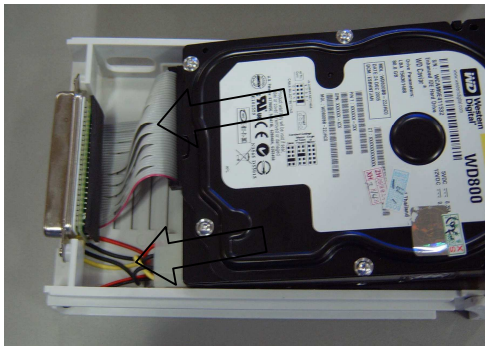


3. **Jump HDD to Master!!**

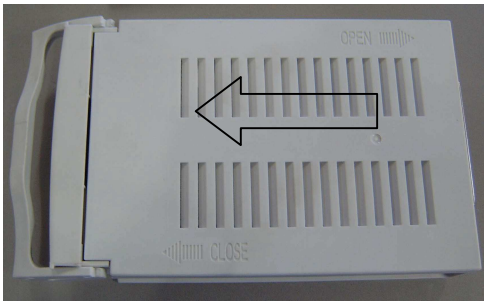


Jump to Master

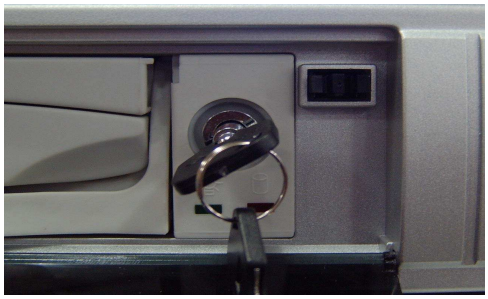
4. Connect the ribbon (IDE) cable & the power cable.



5. Close the top cover of the drawer and put the hard drive drawer back into the DVR



6. Lock the hard drive draw by turning the key clockwise



If you have another HDD, please jump that HDD to SLAVE, and open the machine, put the HDD to the HDD shelf, and then connect the power and digit cable.

4. REMOTE CONTROL

0 ÷ 9, 10+: Select the channel (Full screen)
2x2: 2x2 Screen Mode
3x3: 3x3 Screen Mode
4x4: 4x4 Screen Mode
USB: USB Storage Backup
AUTO: Auto Sequence Mode
ZOOM: 2X Zoom
FREEZE: Freeze
DISPLAY: system Information
MENU/EXIT: System Setup
SEARCH: Time Search, Event Search and Start Stop Search
ENTER: Enter Next Menu
REC: Record
WM: Watermark display
PTZ: Control Speed dome

5. SYSTEM SETUP

Before using the video recorder, the first step is to set up the system according to user's needs; otherwise the machine will run with the default settings.

5.1 SETUP MENU

When in setup mode, push upward button or downward button, the cursor will move among the settable items, continuous pushing will make the cursor move among the options one by one, and it can recur. The selected one will display in yellow color.

While choosing digital fields, e.g. year, month, day, hour, minute, second etc, push leftward button or rightward button, the cursor can move leftward or rightward among.

The several digits of one field, continuous pushing will make it move among digits one by one, and it can recur.

Please push leftward or rightward button to change the value that the cursor on, push "ENTER" button to enter sub menu and push menu button to return to previous menu.

Long press the menu/search button on the keyboard or press the remote controller to enter the Setup Main Menu. You can show password input box according setting of password set. If you fault password input 3-times, then you can't enter the setup menu. Default password is "0000",

If you enter the correct password, the main menu will display ad below.

5.2 SYSTEM SETUP

Push “ENTER” button to enter sub menu

PLAY REPEAT: Set the Playback Repeat

VIDEO SYSTEM: Set the NTSC/PAL

BUZZER SOUND: Set the Buzzer On/Off

5.2.1 TIME/DATA SET

Set the date and time.

DATE: Set the date

TIME: Set the time

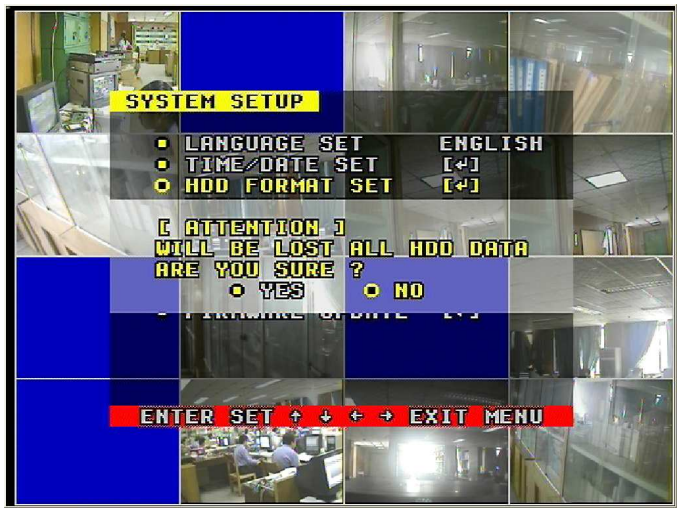
FORMAT: Set the time display format

DISPLAY: Set the time display on/off

5.2.2 HDD FORMAT SET

Format the hard disk.

Select "YES", to format the hard disk. All video on the HDD will loss. If you have two HDD, chose master or slave HDD format or all formats.



5.2.3 FACTORY RESET

Initialize all the setup, the DVR will reset to default. You need reboot the DVR.

5.3 DISPLAY SETUP

BOUND COLOR: set the color of video boundary (BLACK / WHITE / GRAY).

BLANK COLOR: set the background color of loss video (BLACK / WHITE).

VGA set: Set the VGA resolution (800*600 60Hz, 800*600 75Hz, 1024*768 60Hz 1024*768 75Hz, 1280*1024 60Hz)

5.3.1 CAMERA NAME SET

When the cursor moves to camera name, please push enter button, the camera name setup window will appear, which is illustrated as below.

Each channel's name is the combination of eight characters. Push upward or downward button to select each character, push rightward or leftward button to modify each character, and then push enter button to save this name.

5.3.2 COLOR SET

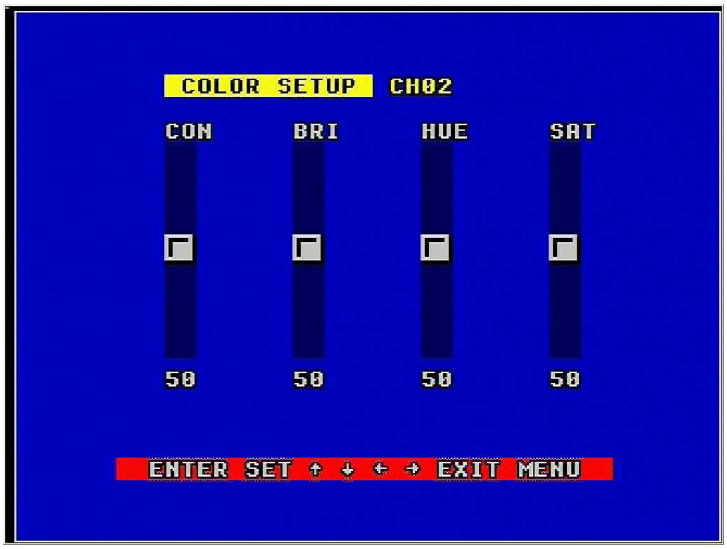
When the cursor moves to color set, please push enter button, the Color setup window will appear, which is illustrated as below.

CON: picture contrast

BRI: picture brightness

HUE: picture hue

SAT: picture saturation

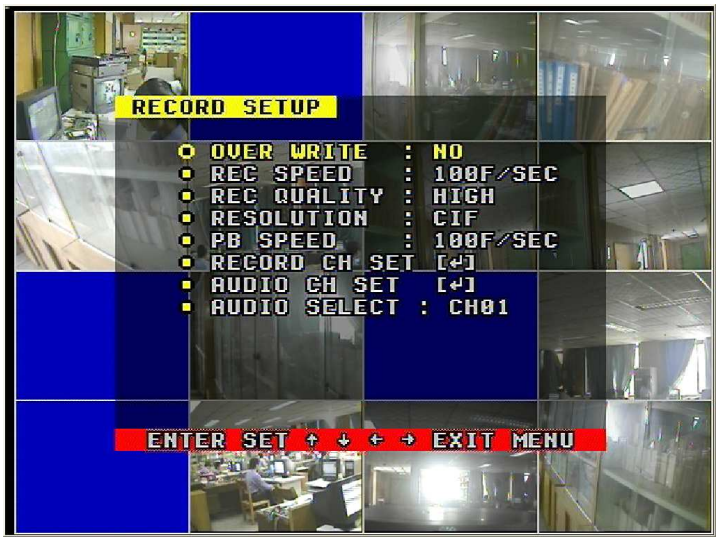


5.3.3. AUTO SEQUENCE SET

Set the Display Time of Auto Sequence. Please push enter button, the auto sequence setup window will appear, which is illustrated as below.

Set the time of the relevant channel. Time can be set in the range from 0 to 99 seconds.

5.4 RECORD SETUP


RECORD SETUP
OVER WRITE : NO
REC SPEED : 100F/SEC
REC QUALITY : HIGH
RESOLUTION : CIF
PB SPEED : 100F/SEC
RECORD CH SET [↵]
AUDIO CH SET [↵]
AUDIO SELECT : CH01
ENTER SET ↑ ↓ ← → EXIT MENU

OVER WRITE: if set to “YES”, the DVR will automatically overwrite the HDD from the beginning when the HDD is full; if set to “NO”, the DVR will automatically stop recording when the HDD is full. If there are two HDD in the DVR, when the MASTER HDD is full, the video will store to the SLAVE HDD, and when the SLAVE HDD is also full, the DVR will overwrite the MASTER HDD if set this to yes, otherwise it will stop recording is set to “NO”.

REC SPEED: is the recording frame rate of the DVR. Factory default setting is 30f/sec for NTSC (25f/sec for PAL), which means DVR records the events at the speed of 30 shots of frames per second. The higher the record frame rate, the more natural look will be displayed on the screen when you playback. The lower the record frame rate, the more you can save the space on the hard disk. The highest frame rate is 120f/sec (PAL is 100f/sec) when the resolution is in CIF mode.

REC QUALITY: there are four different video quality settings: VERY LOW, LOW, NORMAL, HIGH and VERY HIGH. The higher the video quality, the clearer images when you playback; the lower the video quality, the more you can save the space on the hard disk drive.

RESOLUTION: is the record picture size of the DVR. There are two modes: CIF and FIELD, default is CIF. In FIELD mode, the record picture is twice bigger than is CIF mode. In CIF mode the REC speed is 120f/sec （PAL is 100f/sec), the maximal REC speed in FIELD mode is 60f/sec (PAL is 50f/sec).

PB SPEED: is the frame rate of playback. Default is NO USE, which means the same as record.

5.4.1 AUDIO CH SET

When the cursor moves to audio CH Set, please push enter button, the audio CH setup window will appear, which is illustrated as below.

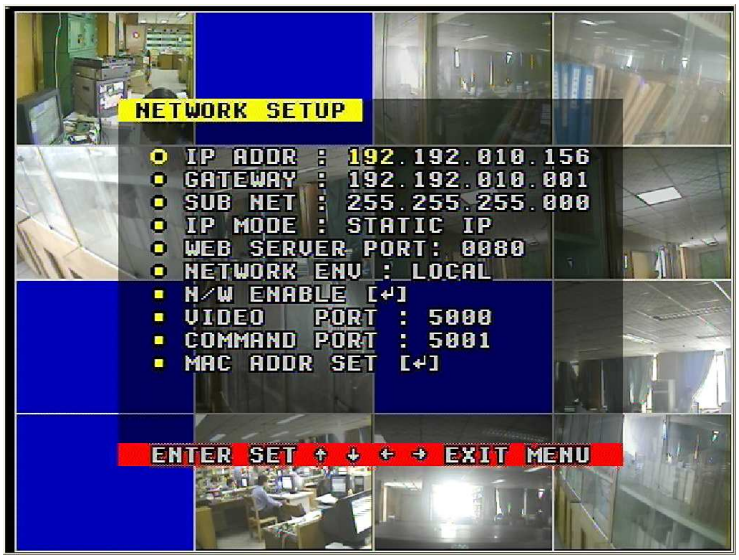
There are four audio input channels, for each channel you can select anyone of the 16 channels. Although there are four audio input channels, you can only record one channel's audio at the same time, so, for the right audio set, you have to select one channel in these four channels in the Record Setup menu.

5.4.2 REC CH SET

When the cursor moves to REC CH Set, please push enter button. The REC CH setup window will appear, it is different for CIF mode and FIELD mode. In FIELD mode, the window is illustrated as below. Push upward and downward buttons to select channel, push leftward or rightward button to change the setting. If the channel is setting OFF, this channel will not be recorded in recording mode. If the resolution is set CIF mode, the REC CH Setup window can't access, and you can't set record ON/OFF for the relevant channel.

5.5 NETWORK SETUP

When the cursor moves to Network Setup, then push enter button, the network setup menu window will appear, which illustrated ad below is. If a PC View software from Internet is connected to the DVR, you can't access this menu unless you disconnect the PC View.


NETWORK SETUP
IP ADDR : 192.192.010.156
GATEWAY : 192.192.010.001
SUB NET : 255.255.255.000
IP MODE : STATIC IP
WEB SERVER PORT: 0080
NETWORK ENV : LOCAL
N/W ENABLE [↵]
VIDEO PORT : 5000
COMMAND PORT : 5001
MAC ADDR SET [↵]
ENTER SET ↑ ↓ ← → EXIT MENU

IP MODE: the DVR has 2 IP modes, STATIC IP and DHCP. If you select STATIC IP, you have to set the IP address manually, if you select DHCP mode, the DVR will automatically get the IP address.

For STATIC IP, push upward or downward button to move the cursor among the digits, you can push rightward or leftward button to modify the digits, also, when select a digit, you can push enter button then push leftward or rightward button to select each bit of the digit, and then push rightward or leftward button to modify the bit of this digit, push enter to save your change.

NETWORK ENV: the DVR has three types of different network conditions: LOCAL, EXTER_LAN, EXTER_WAN. If in local network, please select LOCAL, if for internet use, please choose EXTER_LAN, if the internet condition is not very good, please select EXTER_WAN.

VIDEO PORT: the video transmits port for the computer.

COMMAND PORT: the command transmits port for the computer.

If you change any of the VIDEO PORT and COMMAND PORT or MAC address, you have to restart the DVR to use the "net viewer" software.

Note: if you have change the MAC address, you can't see the "MAC ADDR SET"

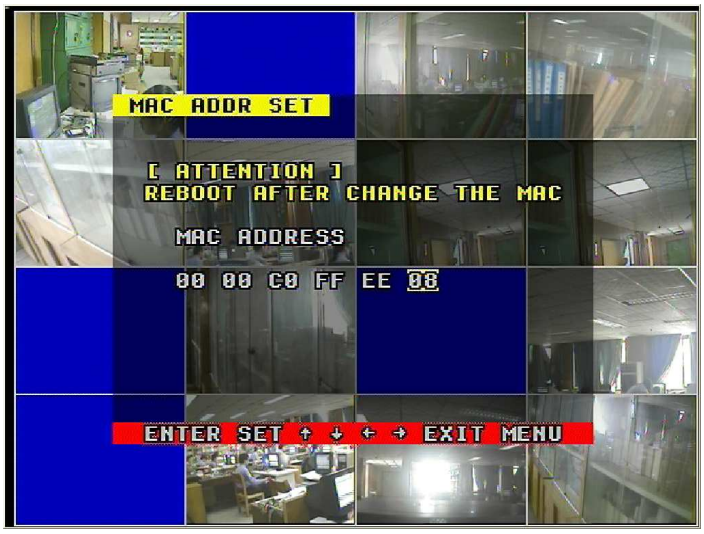
5.5.1. N/W ENABLE SET

If you set the channel OFF, this channel will not transmit to the network, so if you want to see a channel from network, you have to set this channel on.

5.5.2. MAC SET

When the cursor moves to MAC set then push enter button. The MAC set window will appear which is illustrated as below.

If you have more than one DVR in a local area network, you have to set each DVR to have an exclusive MAC address, but **remember that you have only one chance to modify the MAC address, once you have changed the MAC address, this menu will not appear!**



5.6 SENSOR SETUP

When the cursor moves to sensor set then push enter button. The sensor set window will appear which is illustrated as below.

SENSOR SETUP
CHANNEL SELECT:CH01
ALARM ENABLE : OFF
MOTION ENABLE : OFF
MOTION LEVEL : HIGH+
MOTION AREA SET [↵]
BUZZER TIME : 01 SEC
SENSE RECTIME : 01 MIN
ENTER SET ↑ ↓ ← → EXIT MENU

ALARM ENABLE: alarm trigger switch. You can be set to off, N.C. or N.O. If users set it to off, the DVR will ignore the alarm input.

MOTION ENABLE: motion alarm switch. You can be set to on or off. If users set it to off, the motion alarm will be ignored.

MOTION LEVEL: motion sensitivity level. If the figure in the picture is small, please set to high of very high. The default is normal.

BUZZER TIME: buzzer sound time when there is a sensor or motion alarm.

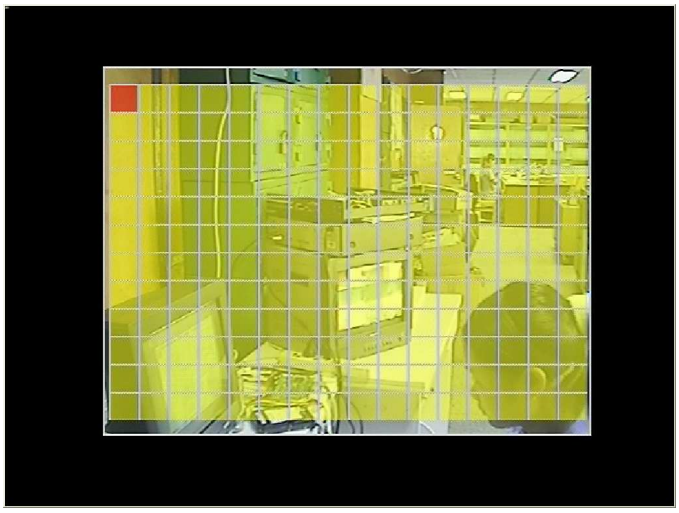
SENSOR RECTIME: when a motion or sensor alarm occurred, the DVR record last time, the default is 1 minute.

Note: users should press schedule button after setting up the parameters so to activate the settings.

5.6.1 MOTION AREA SET

Turn the Motion Block ON/OFF.

When the cursor moves to Alarm set, then push enter button, the alarm setup window will appear, which is illustrated as below. Please push upward, downward, leftward, rightward button to move the cursor and push enter button to change, long push enter change all value the same as you selected.



5.7 SCHEDULE SET

When the cursor moves to Schedule Set, please push enter button, the schedule setup window will appear, which is illustrated as below.

You change a recording schedule during a week using this setup, from Monday to Sunday; you can set a period time in each day.

START: start record time

STOP: stop record time

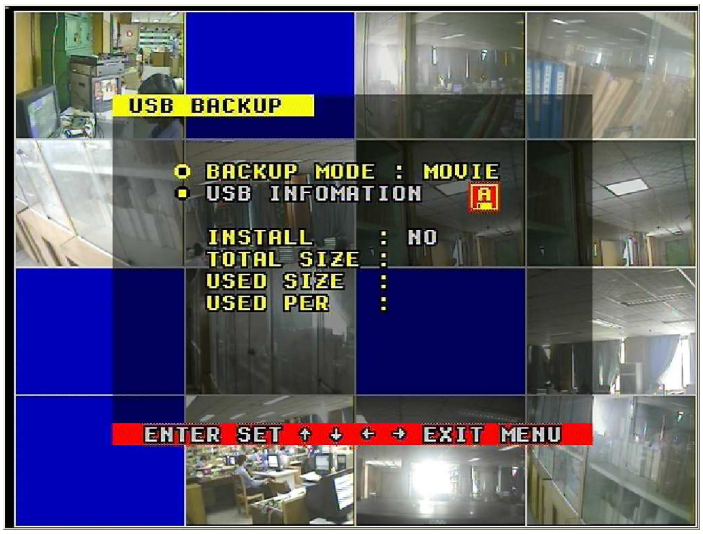
SUN ÷ SAT: Select the weekday for recording (00:00-23:59)

5.8 BACKUP

5.8.1 USB BACKUP.

Plug in the USB device, and press enter button, you can see the right picture.

There are two types of backup mode: STILL and MOVIE, in STILL mode you can backup picture, in MOVIE mode you can backup video.



5.8.2 CD_RW BACKUP

If the DVR is connected to a CD_RW, you can use CD_RW BACKUP. Select this menu, you can see the right picture.

Select the time of backup and backup size you need, and then select the backup start.

5.9 STORAGE INFO

Storage information shows the information on hard disk.

MODEL: Model Number of the Hard Disk

CAPACITY: Total capacity

USED SIZE: Space used

OVER WRITE: The number of times overwritten

5.10 PROTOCOL SET

Set the right protocol, you can control the SPEED DOME by the DVR.

When the cursor moves to Protocol Set, then push enter button, the protocol set window will appear, which is illustrated as below. Push up or down button to move the cursor, and push right or left to change the value.

CHANNEL SEL: select the channel that is connected to the speed dome, which you want to control.

BAUDRATE: select from 1200 bps to 19200 bps. The default is 2400 bps.

DOME ADDR: address of the speed dome, changeable from 0x00 to 0xff.

PROTOCOL: the protocol that DVR control speed dome, include PELCO-P, PELCO-D, NEON, LILIN. The default is PELCO-P.

6. USER'S GUIDELINE

6.1 start the machine

Before starting the machine, please make sure all the items in the "Important Safeguards" at the beginning of this manual are fulfilled.

Before starting the machine, please check the system connection, input and output equipment connection.

Please insure the video-recorder's input video (NTSC/PAL) and the monitor (NTSC/PAL) meet the demands.

Start exterior equipment after checking over.

Insert the removable hard disk case to the end, and lock it up (turn right the hard disk lock); connect the power, the machine start to work.

6.2 Turn off the Machine

Normally turn off the machine when the system shutdown, which means do not to turn off the machine while playing or system setting up, especially not to turn off the machine while recording.

Push recording button to stop recording or push playing button to stop playing or exit from system setup menu, then turn off the power.

If do not use the video recorder for a long time, should pull out the power line from the electrical outlet.

6.3 Normal Recording

Connect the power to all related equipments and ensure that there is video input.

Push display button to check spare space of the hard disk, if there is no much space, please think whether to change hard disk first or select overwriting modes.

Check recording parameter setup before recording; select video quality, frame rate. You cannot change record setting during the process of recording,

Manual recordings belong to normal recording. Under the manual mode (non-schedule status), pushing record button will record all video channels.

Push the record button to begin recording, sixteen channels will start simultaneously recording. While in normal recording mode, push record button, and enter the right password, it will stop recording.

During the process of recording, if the hard disk is full and the system is set to automatic overwrite, then the recording will not be interrupted, and it begins to overwrite the earliest recorded area; if the system is set to overwrite disable, it will stop recording.

6.4 Alarm Recording

Alarm recording is not started by manually pushing record button, the entire recording started by manually pushing the record button are normal record.

Alarm recording can be activated by alarm input signal or motion, so it must to check whether the connection of

alarm input equipment is correct, stable and reliable, and the alarm set is right, please refer to sensor setup.

The prerequisite condition of whether the alarm recording can be activated by exterior input signal or the motion is that the system must be set on schedule. In the menu of alarm setup, for exterior input alarm, alarm enable of that channel must set to “ON”. For motion alarm, motion enable of that channel must set “ON”, and set the right area for motion detect.

Under the state of off-schedule, system will never start alarm recording. Setting schedule on or off is achieved through pushing the schedule button on the front panel, but not through system setup menu and window. Under schedule-on situation, the character “S” will display on the screen,

Alarm video recording cannot stop by pushing record button, but can stop by removing schedule. Because once the system is set on schedule, the schedule cannot be removed randomly, so there is a password protection to remove schedule, only after inputting correct password, you can take schedule off.

Check alarm recording setup before recording; confirm the video quality and the frame rate, the record setting cannot change during recording process.

As long as the alarm input signal is effective, the alarm recoding continues, when the alarm input signal loses efficacy, the time set up by “REC TIME” becomes effective, and when the time goes out, the alarm recording automatically stops. In course of this, if you want to manually stop alarm recording, the only way is to remove schedule (answer the password).

6.5 Time Recording

Time recording starts and stops recording automatically according to the pre-arranged time period. It is applied to fixed timetable. For example, the periodical work time recoding (of off time recording) with fixed start/stop time.

To start time recording function, besides making record schedule setup beforehand, must push down the schedule button on the front panel to set schedule on. While pushing down this button, the schedule symbol “S” will display on the screen. Without pushing the schedule button, the time recording parameter setup will not work.

The prerequisite condition of whether the time recording takes effective is system must be set on schedule.

In time record state, you can push again schedule button the enter password to stop time recording.

Because time recording is correlated closely with time, so before using this function should previously adjust the time.

6.6 Playback

Push play button, system begins to play the images recorded

In the process of playing of fast backward playing, pushing play button will begin normal playing from the current place.

In the process of fast forward playing or fast backward playing, re-pushing play button can resume play. Continuously.

In the process of fast forward playing or fast backward playing, pushing play button will begin normal playing from the current place.

Continuous pushing forward button will change the fast-forward among five levels of speed (X2, X4, X8, X16, and X32) circularly. Continuous pushing reward button will change the fast backward among four levels of speed (X2, X4, X8, and X16) circularly.

During playback mode, long press single frame rewind button will play backward frame by frame; long press single frame forward button will play forward frame by frame. Push play button to play normally.

Push again play button will stop playing.

6.7 Search play

Push search button, search play window will display on the screen.

TIME SEARCH: search play by input time.

EVENT SARCH: search play by event list.

START STOP SEARCH: search play by segment.

Push upward and downward button to move cursor, push enter button to enter submenu you select, push search button to quit from search menu.

6.8 Time search

When the cursor moves to Time Search, then push enter button, the time search window will appear.

Their red block means there has video at that time

Push leftward and rightward button to move the cursor among year, month, day, hour and minute, if you select the year and push enter button you will select month and so it is with day and hour, Push ADD and DEC button to modify the time. If you select the minute and that minute has a red block then you can push enter button to play the video from that time you selected.

6.9 Event Search

When the cursor moves to Event Search, then push enter button, the event search window will appear.

There are four types of event list: MOTION, ALARM, SCHEDULE and NETWORK. MOTION means motion alarm recording; ALARM means sensor alarm recording; SCHEDULE means time recording; NETWORK means network recording

Push upward and downward button to move the cursor among the event list, push leftward and rightward button to see previous or next page, push enter button to play the segment you select. Push search button back to Search Play menu.

If you want to change the HDD between MASTER HDD and SLAVE HDD, just long push search key, then push enter key to change, push menu to give up.

6.10 Start Stop Search

When the cursor moves to Start Stop Search, then push enter button, the Start stop search window will appear.

All record segments are displayed here, push upward and downward button to move the cursor among the segment list, push leftward and rightward button to see previous or next page, push enter button to play the segment you select. Push search button back to Search Play menu.

If you want to change the HDD between MASTER HDD and SLAVE HDD, just long push search key, push enter key to change, push menu to give up.

6.11 USB Backup

Plug in the USB device, go to the menu of Backup set, check that if the USB device was detected or not, and the free space of the USB device is enough or not, select the backup mode, then quit the menu setup.

In shift mode, if you select “STILL” for the backup mode in the Backup Set menu, push the USB button, it begin to backup the main out picture to the USB device, there will be a “S” blinking on the screen, when stop blinking the backup of the picture is done, you can plug the USB device out and see the picture on a computer.

If you select “MOVIE” for the backup mode in the Backup Set menu, push the USB button in shift mode, it begin to backup the main out video to the USB device from the moment, push USB button again to select the end of the backup video, there will be a “A” blinking on the screen. This may take a little time, and make sure the USB device has enough free space, if blinking stops, the backup is ok, you can see the video on a computer with net viewer software.

6.12 USB Update

Create a folder named “firmware” in the USB root directory, copy the update files to the folder, plug in the USB device, go to the menu of update set, check that if the USB device was detected or not, go to the Firmware Update menu and select USB method, move to Update Start and press enter button, update will start.

Then reboot the DVR.

NOTE: do not shut down the DVR when the DVR is updating, it may cause fatal problem.

6.13 Zoom

In shift mode, press zoom button or press the zoom button on the remote controller, the DVR will be in zoom mode. Press upward, downward, leftward or rightward to move the zoom area, then push enter button to zoom, press zoom button again to cancel zoom operation.

6.14 FREEZE

Press the Freeze button on the remote controller or keyboard, on the full screen mode to pause a screen; on the other modes, press the Freeze button to see the Freeze menu. Here, select the channel number to freeze.

6.15 PTZ OPERATION

This DVR can control speed domes, which are connected to the DVR.

To control the speed dome, make sure all the lines are correctly connected, first you must set the right **protocol, baud rates,** and **speed dome's address** for each speed dome, please refer to protocol set.

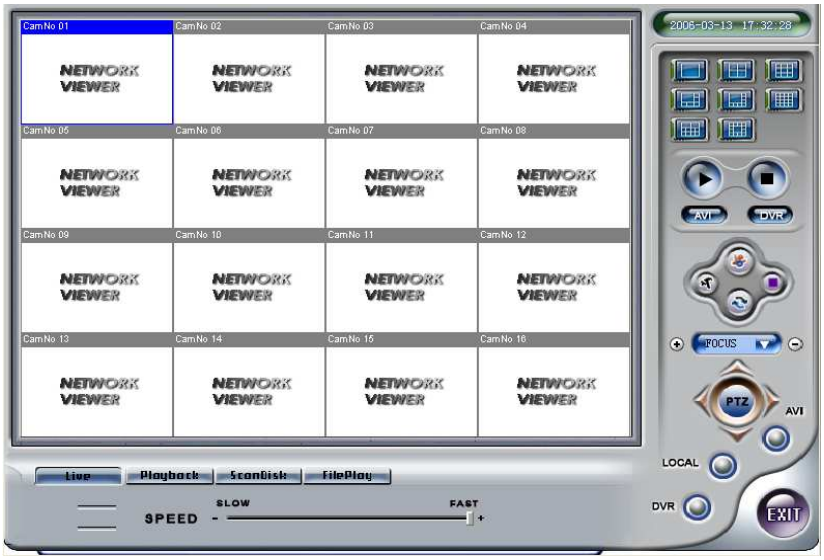
PTZ can only be operated by remote controller, press the PTZ button on the remote controller,"PTZ" will be display on the screen, then select 1 to 16 to choose PTZ channel, the channel number will be displayed after "PTZ". You can press upward, downward, leftward, rightward button to move the speed dome, and press the button again or press enter to stop. If you press the IRIS button, the character "IRIS" will appear on the screen, then you can press the "+" and "-" button to change the IRIS. The same to control the focus, zoom, and speed, also press enter button to stop.

Press the PTZ button one more time to exit from PTZ control. In 8 CH DVR, you also can use PTZ of the DVR control front.

7. USING THE NETWORK VIEWER

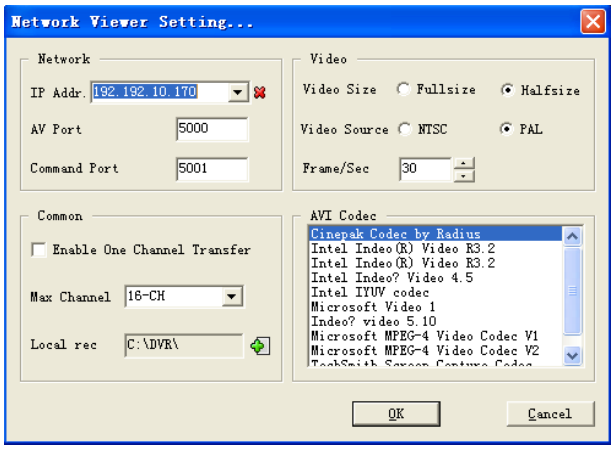
Using the PC view software, you can view the DVR through Internet or local network, also, you can view and backup the video information on the HDD through a computer.

Open the software; you will see the window below:



7.1 Setting

Please click button, you will see the window below: enter the IP address and click “OK” button.

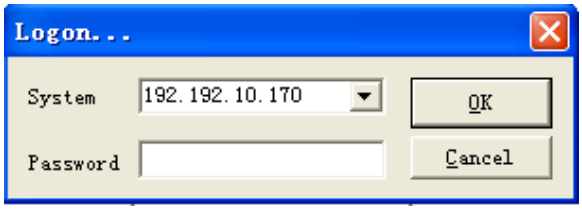


IP Address: Set the IP of the board

Port: Set the communication port and AV port

7.2 Viewer connect

Press button, you can show login box.

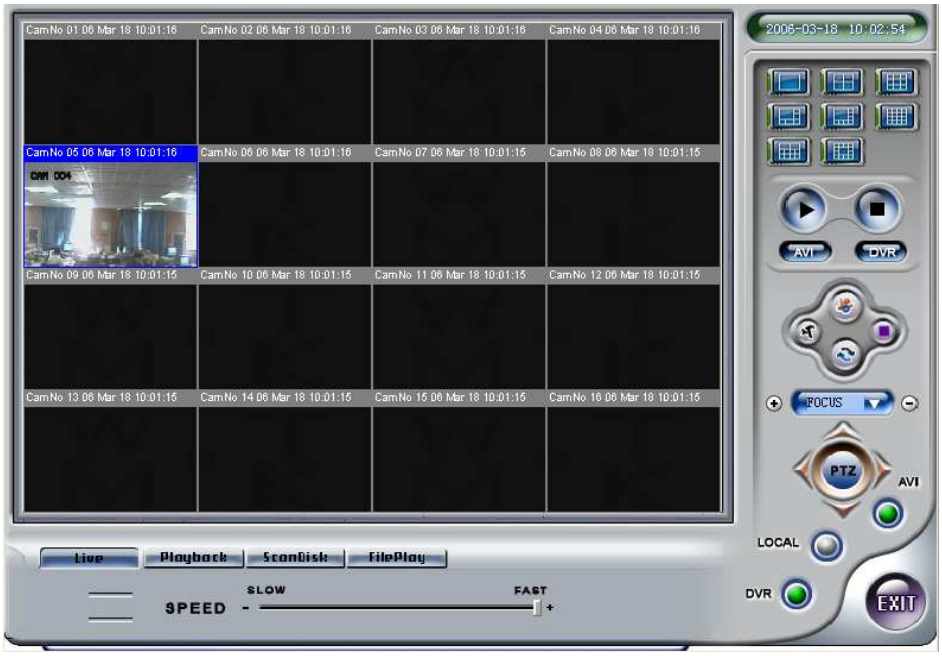


<Connect success>

<Connect fail >

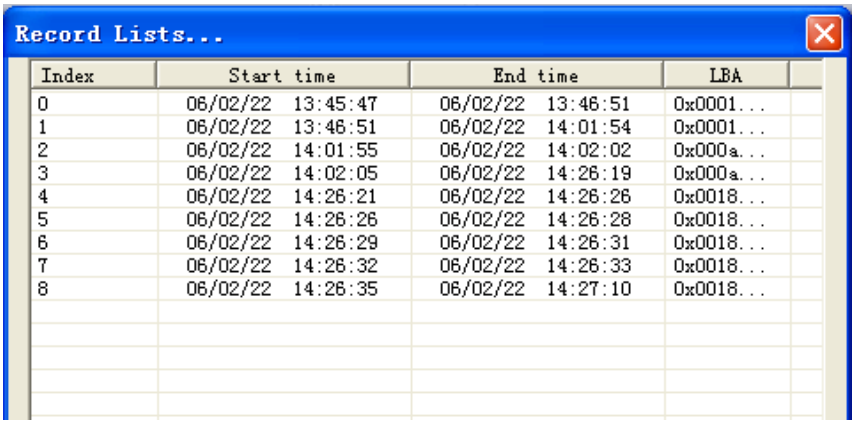
7.3 Liveplay

You can select this button to see live picture, just click the play button.



7.4 Playback

Click "Playback", search window will display. First, you have to select the HDD of the DVR, then click the "Get record list" or "Get event list". If the DVR has record list, you can see the window below:



Double click the record list, you can see the playback video.

The event list operation is the same as record list operation

7.5 Scandisk

Connect the HDD that used in the DVR to a PC and then select Scandisk. Scandisk window will display, click and select one HDD, and then you can play all the video on the HDD.

<Scandisk Menu>

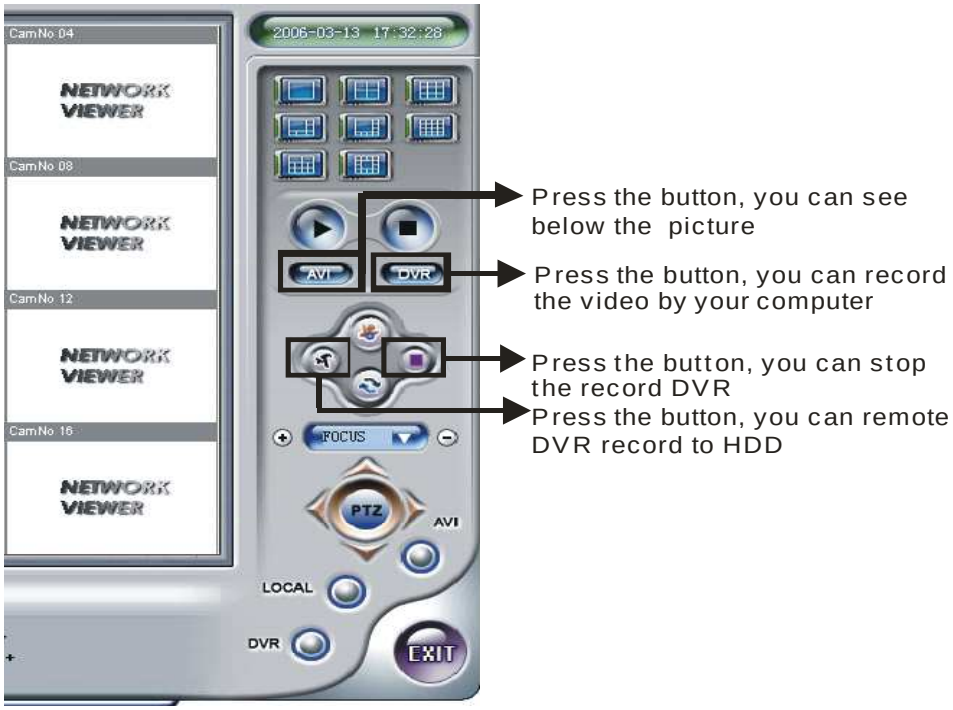
7.6 FilePlay

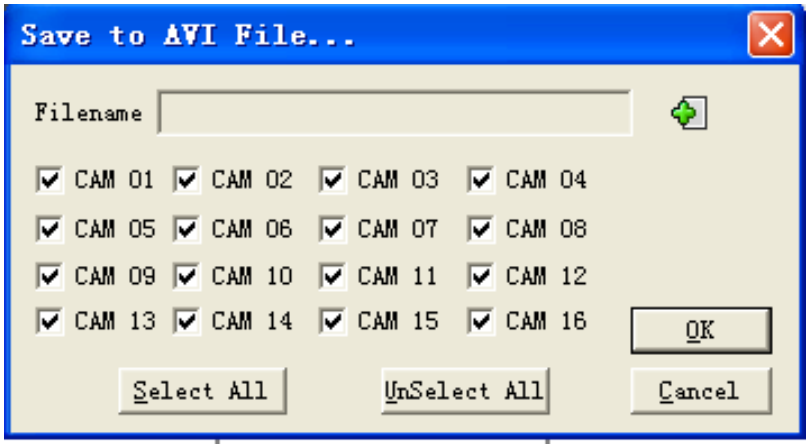
Press “FilePlay” button, you can see the below picture, press the “open” button play the video file on the computer.

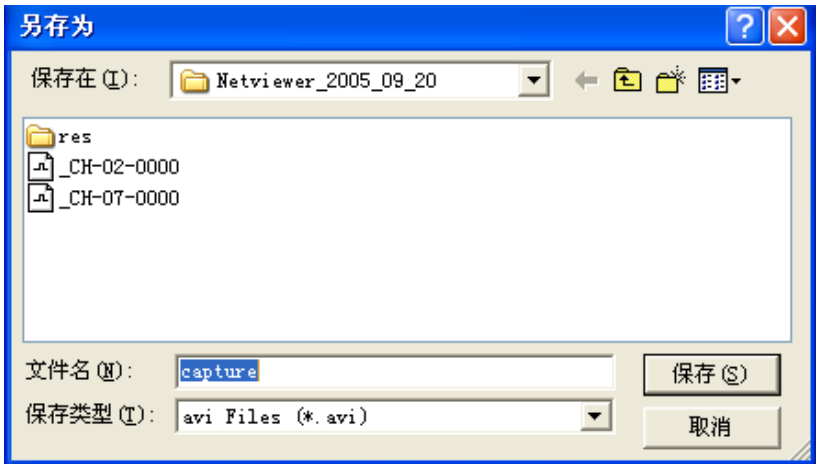
< Fileplay Menu>

7.7 Save to AVI

Save the video played on the current viewer to AVI.




Save to AVI File...
Filename
CAM 01 CAM 02 CAM 03 CAM 04
CAM 05 CAM 06 CAM 07 CAM 08
CAM 09 CAM 10 CAM 11 CAM 12
CAM 13 CAM 14 CAM 15 CAM 16
OK
Select All
UnSelect All
Cancel



<Determine the file name and the location where the file is saved>

Click the Save to AVI button and determine the file name, the location and channels to save. Then AVI saving will start. Click the Save to AVI once more will stop saving.

8. Troubles Shooting

Q: What kind of camera should I buy for this DVR?

A: Any BNC or RCA interface indoor/outdoor/infrared camera will work with the DVR. It doesn't matter whether it's a color or black/white camera. However, web cameras that require a USB interface are not compatible with the DVR.

Q: What kind of alarm device should I buy for DVR?

A: Most sound alarms are compatible with our DVR.

Q; I can’t turn on DVR.

A: Make sure that the power cord is plugged in correctly and the power switch on DVR front panel is on.

Q: I see nothing but a blue screen after I turn on DVR.

A: Check the camera input and video output connection on DVR back panel. If you can’t find problem with these connections, check whether the camera power cable is firmly connected. Make sure the system format for NTSC and PAL is right.

Q: Why cannot I access Time/Date Set, HDD Format Set or Record Set menu?

A: please stop record or play before you access this menu.

Q: Why cannot I access Record CH Set menu?

A: If the DVR recorded resolution is set CIF mode, the REC CH menu window is not accessible.

Q: Why can’t I playback the video that blue or gray?

A: If you select overwrite the DVR, while the HDD is full, it will overwrite some events. These events that have been overwriting were in blue or gray.

Q; I push record button, but the DVR does not start recording, why?

A: Push display button to see if there is a hard disk detected, also if the DVR is in schedule mode (there is a “S” on the screen in yellow) you cannot start recording by push record button, you have to push schedule button again to cancel schedule mode.

Q: what kind of hard disk drive should I purchase to make the DVR run?

A: Any PC compatible IDE, ATA hard disk drive will work.

Q: Can my desktop PC read the video data on hard disk drive in DVR?

A: Yes, you can use our software to read all video data on hard disk.

Q: When the network connection between DVR and client computer is cut off, why the DVR halts and clock stops?

A: In case network is cut off abnormally, DVR machine will halts for 20 seconds without response to any operation of pressing front panel buttons. 20 seconds later, it will restore normal state, but the icon that shows network status won’t disappear in 10 minutes and in this period client computer cannot connect to the DVR or enter network menu.

9. Specification

Video signal	NTSC/PAL	
Compression	M-JPEG	
Video signal	Input	8/16 CH (BNC),75 Ohm,1.0 Vp-p
	Output	1 CH for S-VIDEO 2 CH for monitor (BNC)
Resolution	Display	720(H)×480(V) (NTSC) 720(H)×576(V) (PAL)
	Record	720(H)×480(V) (NTSC) 720(H)×576(V) (PAL) FIELD 320(H)×240(V) (NTSC) 320(H)×288(V) (PAL) CIF
Playback	Record mode	Manual record /motion /schedule /alarm record
	Search mode	Time search/event search/ start stop search
	Playback speed	100 fps（PAL）max 120 fps（NTSC）max
Network	1 RJ45 port, live, playback, remote monitoring, Internet Explorer support	
Other function	Backup	CD-RW (optional), USB , network
	Update	USB
	Pan/Tilt/Zoom	RS485
	Alarm input	8/16 CH
	Alarm output	1 CH
	Remote control	Yes
	Language	English, French, German, Italian, Spanish, Polish
	HDD	Two max (each over 200GB)
Other	Operating Temperature	From –5℃ to +40℃
	Humidity	<90% max NON condensing
	Power supply	Input 100V AC÷ 240V AC; consumption 36÷39.6W
	Exterior size	430 (W) × 65 (H) × 385 (D) mm

Designs and specifications are subject to change without notice.

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